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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,426	03/12/2004	Michael Kozee	224488	8413

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EXAMINER

KOSLOW, CAROL M

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/800,426

Applicant(s)

KOZEE ET AL.

Examiner

C. Melissa Koslow

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22, 25-36, 39-45, 48-51, 54-65, 68-82, 85-96, 99, 102-146 and 148-157 is/are pending in the application.
- 4a) Of the above claim(s) 115, 119 and 121 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 5, 7-14, 18-22, 25-36, 39-42, 48-51, 75-82, 85-96, 99, 102-104, 106, 108, 110, 111, 114, 116, 127-144, 146 and 148-157 is/are allowed.
- 6) ☒ Claim(s) 2-4, 6, 15, 16, 43, 44, 54-65, 68, 69, 73, 74, 105, 107, 109, 112, 113, 118 and 122 is/are rejected.
- 7) ☒ Claim(s) 17, 45, 70, 71, 123-126 and 145 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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This action is in response to applicants' amendment of 26 October 2005. The amendment to the specification have overcome the objection to the specification with respect to the lack of antecedent basis for the non-luminescent colorant can be titanium dioxide, any triarylmethane dye or any xanthene dye. Applicants statements with respect to the teachings in paragraphs [0019] and [0039] have overcome the objections to the specification with respect to the lack of antecedent basis for the species act to decrease the intensity of the emission from the luminescent compound, that the onium salt can be iodonium salts or sulfonium salts each having at least one aryl group. The amendments to the claims have overcome the objection to the claims and the 35 USC 112 rejections. The amendments to the claims have also overcome the art rejections based on U.S. patents 5,296,275, 5,028,792 and 5,702,511. Applicant's arguments with respect to the amended claims have been considered but are moot in view of the modified grounds of rejection based on the amended claims.

The election of species is withdrawn upon further examination and search of the pending claims. Accordingly, claim 4 has been examined and is no longer withdrawn.

Claims 115, 119 and 121 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2-4, 6, 15, 16, 43, 44, , 54-65, 68, 69, 73, 74, 105, 107, 109, 112, 113, 118 and 122 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. patent 5,296,275

This reference teaches an ink-jetable phototranschromic ink comprising an optical brightener, which is a colorless luminescent compound, a binder resin, a pH sensitive dye, a

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photoacid progenitor, a solvent such as diethylene glycol, wetting agents and hiding pigments, such titanium dioxide. When the ink is exposed to ultraviolet radiation, the photoacid progenitor releases protons, i.e. an acid radical, which acts to change the pH of the ink and thus change the color, or in other words the absorption characteristic, of the pH sensitive dye. While the reference exemplifies nitro-substituted aromatic aldehydes, it teaches the use of any photoacid progenitor. Thus one of ordinary skill in the art would have found it obvious to use any well known photoacid progenitor, such as those claimed. Optical brighteners are colorless luminescent dyes that emit ultraviolet to blue light when exposed to ultraviolet light. The pH sensitive dye can be p-methyl red or ethyl orange, which are azo dyes or lissamine green or phenol red, such are triarylmethane dyes or a fluorescent colored dye as Congo red (an azo dye). This dye emits ultraviolet to blue light when exposed to ultraviolet light. Since the ink is ink-jettable, it must inherently have the properties of claims 107, 109, 112 and 113, which are those required for an ink-jet ink. The reference suggests the claimed ink.

This ink is used to form a UV or light dosimeter where the ink is printed onto a substrate, using any of the taught devices, such as a ink-jet printer and then the dosimeter is exposed to a source of UV radiation, which is the claimed deactivation energy source and the eye, which reads upon the claimed reading device, detects the visual change in color. Therefore the reference suggests the claimed system.

The rejected claims do not require the presence of a volatile solvent nor do the claims exclude the presence of water. There is nothing in the reference excluding any of the admitted known photoacids of claims 54-65 nor is there no teaching in the art indicating that the photoacids of claims 54-65 would not provide a phototranschromic ink when mixed with water,

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the taught wetting agents, the taught thickening agents, and taught flow aids. Given the general definition in column 2, lines 59-60 of the reference of the use of any known photoacid, there is a reasonable expectation of success that any known photoacids would work or cooperate to form an ink when mixed with the other taught components. Applicants' arguments are not convincing.

Claim 1 is directed to an allowable product. Pursuant to the procedures set forth in the Official Gazette notice dated March 26, 1996 (1184 O.G. 86), claims 114 and 116, directed to the process of making or using the patentable product, previously withdrawn from consideration as a result of a restriction requirement, are now subject to being rejoined. Process claims 114 and 116 hereby rejoined and fully examined for patentability under 37 CFR 1.104. In accordance with the Official Gazette notice, *supra*, process claims 115, 119 and 121, which do not depend from or otherwise include all the limitations of the allowable product, have NOT been rejoined.

Claims 1, 5, 7-14, 18-22, 25-36, 39-42, 48-51, 75-82, 85-96, 99, 102-104, 106, 108, 110, 111, 114, 116, 117, 127-144, 146 and 148-157 are allowable over the cited art of record.

Claims 17, 45, 70, 71, 123-126 and 145 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

There is no teaching or suggestion in the cited art of record of an ink-jet ink comprising a luminescent colorant, optionally a non-luminescent colorant and an energy active compound, which generates at least one acid species when exposed to an effective amount of energy where the species alters a characteristic of at least one of the colorants and a volatile organic solvent. Claim 120 is allowable over the cited art of record since there is no teaching of suggestion of an

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ink-jet ink comprising fluorescent colorant, a pH sensitive colorant, a solvent, a binder and a photoactive acid releasing compound. This ink is different and non-obvious over the taught inks of an invisible or colorless fluorescent compound, a pH sensitive colorant, a solvent, a binder and a photoactive acid releasing compound. There is no teaching or suggestion in the cited art of record of an ink-jet ink comprising a colorant and an energy active compound, which generates at least one acid species when exposed to an effective amount of energy where the species alters the intensity of absorption. There is no teaching or suggestion in the cited art of record of an ink-jet ink comprising an IR luminescent colorant and an energy active compound, which generates at least one acid species when exposed to an effective amount of energy where the species alters a characteristic of the colorant. There is no teaching or suggestion in the cited art of record of an ink-jet ink comprising one of the luminescent colorants of claims 123-126 and an energy active compound, which generates at least one acid species when exposed to an effective amount of energy where the species alters a characteristic of the colorant. There is no teaching or suggestion in the cited art of record of an ink-jet ink comprising a colorant and a photoinitiator, which generates at least one acid species when exposed to an effective amount of energy where the species alters a characteristic of the colorant.

This application contains claims 115, 119 and 121 drawn to an invention nonelected with traverse in the paper dated 26 may 2005. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

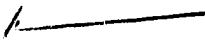
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk
December 21, 2005


C. Melissa Koslow
Primary Examiner
Tech. Center 1700